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Notice of Allowability

Application No.

10/825,215

Examiner

Gordon J. Stock

Applicant(s)

KWAN, YIM BUN PATRICK

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received 4/27/07.
2. ☒ The allowed claim(s) is/are 1-8, 10-12, 14, 15 and 20-33.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/928,462.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|--|--|

DETAILED ACTION

1. The Amendment received on April 27, 2007 has been entered into the record.

Terminal Disclaimer

2. The terminal disclaimer filed on April 27, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,819,425 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Drawings

3. Due to the amendment to the specification, the Drawings received on April 16, 2004 are accepted by the Examiner.

Allowable Subject Matter

4. **Claims 1-8, 10-12, 14, 15, and 20-33** are allowed.

The following is an examiner's statement of reasons for allowance:

As to **claim 1**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a lithographic projection apparatus the grid grating includes a reference mark, in combination with the rest of the limitations of **claims 1, 3, 7, 8, 10-12**.

As to **claim 2**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a lithographic projection apparatus comprising two grid gratings and two sensor heads, in combination with the rest of the limitations of **claim 2**.

As to **claim 4**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a lithographic projection apparatus one grid grating mounted on a reference frame and at least one sensor head mounted on said moveable object, in combination with the rest of the limitations of **claims 4, 21-33**.

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As to **claim 5**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a lithographic projection apparatus a grid grating has a length in said first direction greater than or equal to the range of motion of said moveable object in said first direction, in combination with the rest of the limitations of **claim 5**.

As to **claim 6**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a lithographic projection apparatus said grid grating is positioned so as to be substantially coplanar with the functional surface of said patterning device or substrate, in combination with the rest of the limitations of **claim 6**.

As to **claim 14**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a device manufacturing method the particular measuring displacements step using at least one grid grating including a reference mark, in combination with the rest of the limitations of **claims 14, 15, and 20**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. With regards to Applicant's Remarks (pages 9-12) received on April 27, 2007, due to the receipt of the proper terminal disclaimer on April 27, 2007 and due to the amendment to the claims, the previous rejections under 35 U.S.C. 101, 112 second paragraph, and 103(a) and the previous double patenting rejection have been withdrawn (see action: 20070120).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure: U.S. Patent 4,820,055 to Müller

U.S. Patent 5,151,754 to Ishibashi et al.

U.S. Patent 5,610,715 to Yoshii et al.

U.S. Patent 6,781,694 to Nahum et al.

US 2002/0145717 to Baselmans et al.

U.S. Patent 7,102,729 to Renkens et al.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (571) 273-8300

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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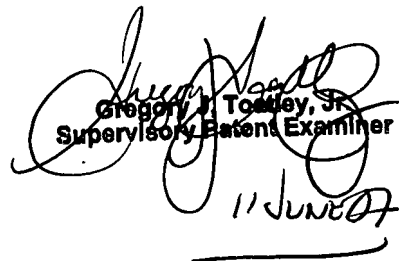
supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gs

June 7, 2007

Gregory J. Toatley, Jr.
Supervisory Patent Examiner
Art Unit 2877


Gregory J. Toatley, Jr.
Supervisory Patent Examiner
11 June 07